AMENDMENTS TO THE CLAIMS

Claims 1-21 and 25-27 are presently pending in this application. Claims 22-24, which are drawn to non-elected subject matter, are cancelled herein without prejudice or disclaimer. Claims 25-27 are added herein.

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended) A method for destroying or impairing target cells that comprise a lesion in the vascular system in a mammalian subject comprising:

administering to the subject a therapeutically effective amount of a photosensitizing agent, wherein said photosensitizing agent is conjugated to a ligand that selectively binds to a receptor on target cells of the lesion;

irradiating at least a portion of the subject with light at a wavelength absorbed by said photosensitizing agent, wherein said light is provided by a light source that is external to the intact body of the subject; and wherein said irradiation is at a relatively low fluence rate that results in the activation of said photosensitizing agent; ~~agent or said prodrug product~~

wherein said ~~PDT drug~~ photosensitizing agent is cleared from the skin and subcutaneous tissues of the subject prior to said irradiation.

2. (Original) A method for destroying or impairing target cells that comprise a lesion in the arterial vascular system in a mammalian subject comprising:

administering to the subject a therapeutically effective amount of a first conjugate comprising a first member of a ligand-receptor binding pair conjugated to an antibody or antibody fragment, wherein said antibody or antibody fragment selectively binds to a target cell or target tissue antigen;

administering to the subject a therapeutically effective amount of a second conjugate comprising a second member of the ligand-receptor binding pair conjugated to a photosensitizing agent or photosensitizing agent delivery

system or prodrug, wherein the first member binds to the second member of the ligand-receptor binding pair;

irradiating at least a portion of the subject with light at a wavelength absorbed by said photosensitizing agent, wherein said light is provided by a light source that is external to the subject; and wherein said irradiation is at a relatively low fluence rate that results in the activation of said photosensitizing agent or prodrug product.

3. (Original) The method of claim 1 or 2, wherein said light source is selected from the group consisting of one or a plurality of: laser diodes, fiber lasers, LEDs, non-laser light source, cold cathode fluorescent tube, incandescent lights, halogen lights, polymeric luminescent devices, other types of fluorescent lights, discharge lamps, and other electroluminescent devices.

4. (Original) The method of claim 1 or 2, wherein said light is directed through the skin in a direction parallel and lengthwise to the wall of a vascular vessel having the lesion.

5. (Original) The method of claim 3, wherein said laser diode is coupled to an optical fiber, and wherein said optical fiber directs said light lengthwise to the vessel wall having the lesion.

6. (Original) The method of claim 3, wherein said light emitting diode is a light emitting diode strip, and wherein said light emitting diode strip is placed over the skin overlying the lesion.

7. (Original) The method of claim 5, wherein said optical fiber diffuses said light when placed over the vessel wall having the lesion.

8. (Original) The method of claim 5, wherein said light source is a mat comprising a plurality of said optical fiber.

9. (Original) The method of claim 1 or 2, wherein said photosensitizing agent is selected from the group consisting of: indocyanine green; methylene blue; lutetium texaphyrin; toludine blue; aminolevulinic acid (ALA) and any other agent that absorbs light in a range of 600 nm - 1100 nm;

and wherein said agent may be delivered as a delivery system or as a prodrug, the product thereof resulting in the photosensitizing agent.

10. (Original) The method of claim 1 or 2, wherein said wavelength is from about 600 nm to about 1100 nm.

11. (Original) The method of claim 10, wherein said wavelength is greater than about 700 nm.

12. (Original) The method of claim 11, wherein said light results in a single photon absorption mode by the photosensitizing agent.

13. (Currently amended) The method of claim 9, wherein ~~a complex, comprising said photosensitizing agent conjugated to~~ the ligand is LDL or VLDL. ~~VLDL, localizes in the lesion.~~

14. (Original) The method of claim 13, wherein said complex is administered intravenously.

15. (Original) The method of claim 2, wherein said target tissue antigen is selected from the group consisting of: tumor surface antigen; tumor endothelial antigen; non-tumor endothelial antigen; and tumor vessel wall antigen.

16. (Original) The method of claim 2, wherein said ligand-receptor binding pair is selected from the group consisting of: biotin-streptavidin; chemokine-chemokine receptor; growth factor-growth factor receptor; and antigen-antibody.

17. (Original) The method of claim 1 or 2, wherein said photosensitizing agent delivery system comprises a liposome delivery system consisting essentially of the photosensitizing agent.

18. (Previously presented) The method of claim 1 or 2, wherein said light source is pulse modulated to maximize depth of tissue penetration and minimize heat generation and power consumption.

19. (Previously presented) The method of claim 1 or 2, wherein the total fluence of the light used for irradiating is between 30 Joules and about 25,000 Joules.

20. (Previously presented) The method of claim 1 or 2, wherein the total fluence of the light used for irradiating is between about 100 Joules and about 20,000 Joules.

21. (Previously presented) The method of claim 1 or 2, wherein the total fluence of the light used for irradiating is between about 500 Joules and about 10,000 Joules.

Claims 22 - 24 (Cancelled).

25. (New) The method of claim 1, wherein the ligand is an antibody or an antibody fragment specific to an antigen selected from the group consisting of tumor surface antigen; tumor endothlial antigen; non-tumor endothelial antigen; tumor vessel wall antigen; neointimal antigens; arterial plaque antigens; and vascular smooth muscle cell antigens.

26. (New) The method of claim 1, wherein the ligand is heparin or angiotensin II.

27. (New) The method of claim 2, further comprising administering to the subject a liposome delivery system separately conjugated to the second member of the ligand-receptor binding pair.